

0118  
conclude

suitable for use in microencapsulation. Gelatin and its derivatives can thus be used in a variety of microencapsulation devices and techniques, for example, in the microencapsulation of fragrances for advertising and sample manufacture.

At page 87, replace the paragraph beginning at line 14 with the following paragraph.

0119

As a further refinement of the heat hydrolyzed recombinant human gelatins discussed, we have demonstrated the utility of a yeast multi-gene recombinant expression methodology for the production of human gelatins with discrete fragments of the  $\alpha 1(I)$  chain of human type I collagen. This technology allowed us to produce well-defined, highly homogeneous gelatin fragments ranging in size from 6-65 kDa. This presents unsurpassed flexibility in terms of the size and biophysical properties of the gelatin that can be used for specific applications.

IN THE CLAIMS

Please cancel claims 1, 22-29, 31-41, 52, and 63 without prejudice to renewal.

Please amend claims 2, 3, 5-14, 16-21, 30, 42-51, 53-62, and 64-74 as follows.

- 01031  
0220
2. (Once Amended) The recombinant human gelatin of claim 20, wherein the recombinant human gelatin has a molecular weight selected from the group consisting of about 5 kDa, about 8 kDa, about 9 kDa, about 14 kDa, about 16 kDa, about 22 kDa, about 23 kDa, about 36 kDa, about 44 kDa, and about 65 kDa.
  3. (Once Amended) The recombinant human gelatin of claim 20, wherein the recombinant human gelatin has a molecular weight range selected from the group consisting of about 0 to 50 kDa, about 10 to 30 kDa, about 30 to 50 kDa, about 10 to 70 kDa, about 50 to 70 kDa, about 50 to 100 kDa, about 100 to 150 kDa, about 150 to 200 kDa, about 200 to 250 kDa, about 250 to 300 kDa, and about 300 to 350 kDa.

5. (Once Amended) The recombinant human gelatin of claim 20, wherein the recombinant human gelatin has a Bloom strength selected from the group consisting of 50, 100, 150, 200, 250, and 300.
6. (Once Amended) The recombinant human gelatin of claim 20, wherein the recombinant human gelatin has a Bloom strength of between 0 and 100.
7. (Once Amended) A composition comprising a recombinant gelatin, wherein the recombinant gelatin is partially hydroxylated, and further wherein the hydroxylation is on proline residues.
8. (Once Amended) A composition comprising a recombinant gelatin, wherein the recombinant gelatin has a percentage hydroxylation selected from the group consisting of 20 to 80%, 30 to 80%, 40 to 80%, 60 to 80%, 80 to 100%, 20 to 60%, 30 to 60%, 40 to 60%, 20 to 30%, 20 to 40%, and 30 to 40%.
9. (Once Amended) The composition of claim 20, wherein the recombinant human gelatin is non-hydroxylated.
10. (Once Amended) The composition of claim 20, wherein the recombinant human gelatin is hydrolyzed.
11. (Once Amended) The composition of claim 20, wherein the recombinant human gelatin is partially hydrolyzed.
12. (Once Amended) A composition comprising a recombinant gelatin, wherein the recombinant gelatin comprises a homogeneous mixture of recombinant gelatin polypeptides.
13. (Once Amended) The composition of claim 20, wherein the recombinant human gelatin comprises a heterogeneous mixture of recombinant human gelatin polypeptides.

- Q21
14. (Once Amended) The composition of claim 20, wherein the recombinant human gelatin is obtained from one type of collagen free of any other collagen.

16. (Once Amended) A composition comprising a recombinant gelatin, wherein the recombinant gelatin has an endotoxin level below 1.000 EU/mg.

- Q22
17. (Once Amended) A composition comprising a recombinant gelatin, wherein the recombinant gelatin has an endotoxin level below 0.500 EU/mg.

18. (Once Amended) A composition comprising a recombinant gelatin, wherein the recombinant gelatin has an endotoxin level below 0.050 EU/mg.

19. (Once Amended) A composition comprising a recombinant gelatin, wherein the recombinant gelatin has an endotoxin level below 0.005 EU/mg.

20. (Once Amended) A composition comprising a recombinant human gelatin.

21. (Once Amended) A recombinant gelatin comprising the amino acid sequence of SEQ ID NO:18.

- Q23
30. (Once Amended) A recombinant gelatin comprising the amino acid sequence of SEQ ID NO:29.

- Q24
42. (Once Amended) A binding agent comprising the recombinant human gelatin of claim 20.

43. (Once Amended) An encapsulant comprising the recombinant human gelatin of claim 20.

44. (Once Amended) A stabilizing agent comprising the recombinant human gelatin of claim 20.

45. (Once Amended) A film-forming agent comprising the recombinant human gelatin of claim 20.

46. (Once Amended) A moisturizing agent comprising the recombinant human gelatin of claim 20.

47. (Once Amended) An emulsifier comprising the recombinant human gelatin of claim 20.

48. (Once Amended) A thickening agent comprising the recombinant human gelatin of claim 20.

49. (Once Amended) A gelling agent comprising the recombinant human gelatin of claim 20.

50. (Once Amended) A colloidal agent comprising the recombinant human gelatin of claim 20.

51. (Once Amended) An adhesive agent comprising the recombinant human gelatin of claim 20.

53. (Once Amended) A pharmaceutical composition comprising a recombinant human gelatin.

54. (Once Amended) A hard gel capsule comprising the recombinant human gelatin of claim 20.

55. (Once Amended) A soft gel capsule comprising the recombinant human gelatin of claim 20.

- 025 conclude*
56. (Once Amended) A plasma expander comprising the recombinant human gelatin of claim 20.
57. (Once Amended) A colloidal volume replacement material comprising the recombinant human gelatin of claim 20.
58. (Once Amended) A graft coating comprising the recombinant human gelatin of claim 20.
59. (Once Amended) A medical sponge comprising the recombinant human gelatin of claim 20.
60. (Once Amended) A medical plug comprising the recombinant human gelatin of claim 20.
61. (Once Amended) A pharmaceutical stabilizer comprising the recombinant human gelatin of claim 20.
62. (Once Amended) A microcarrier comprising the recombinant human gelatin of claim 20.
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- 025 4/24/10*
64. (Once Amended) An edible composition comprising the recombinant human gelatin of claim 20.
65. (Once Amended) A protein supplement comprising the recombinant human gelatin of claim 20.
66. (Once Amended) A fat substitute comprising the recombinant human gelatin of claim 20.
67. (Once Amended) A nutritional supplement comprising the recombinant human gelatin of claim 20.

68. (Once Amended) ~~An edible coating comprising the recombinant human gelatin of claim 20.~~

69. (Once Amended) A photographic composition comprising the recombinant gelatin of claim 7.

70. (Once Amended) A photographic composition comprising the recombinant human gelatin of claim 20.

71. (Once Amended) A cosmetic composition comprising the recombinant human gelatin of claim 20.

72. (Once Amended) An industrial composition comprising the recombinant human gelatin of claim 20.

73. (Once Amended) A cell culture composition comprising the recombinant human gelatin of claim 20.

74. (Once Amended) A composition for laboratory use comprising the recombinant human gelatin of claim 20.

Please add new claim 75 as follows.

927 75. (New) The pharmaceutical stabilizer of claim 61, wherein the pharmaceutical stabilizer is a vaccine stabilizer.

Attached hereto is a version of the sections of the specification amended above with markings to show changes made. Also attached is a version of the claims with marking to show changes made. The reiterated claims are also listed for the Examiner's convenience.